Application No. 10/049,975
Filed: October 1, 2002
Confirmation No.: 6238
TC Art Unit: 1641

STATUS OF THE CLAIMS

1. (PREVIOUSLY PRESENTED) A method of assaying substances that includes the following steps:

- providing a surface that has at least one reaction partner R1 bonded to a surface
- placing in contact with the surface a solution that contains at least the substance being assayed, at least one compound containing a fluorophor and at least one dye that absorbs in the absorption and/or emission range of the fluorophor, wherein a complex forms on reaction partner R1 on the surface and wherein this complex contains, besides reaction partner R1 at least the substance being assayed and the compound containing at least one fluorophor, and
- exciting the fluorophor bonded to the surface by the evanescence field of a light source and measuring the fluorescence produced.

2. (PREVIOUSLY PRESENTED) The method according to Claim 1, wherein the substance being assayed, as reaction partner R1, bonds to reaction partner R2 on the surface.

3. (PREVIOUSLY PRESENTED) The method according to Claim 2, wherein the reaction partner R1 bonded to the surface is an antigen or an antibody.

4. (PREVIOUSLY PRESENTED) The method according to Claim 1, wherein a reaction partner R2 contains the substance being assayed and bonds to reaction partner R1 on the surface.

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5. (PREVIOUSLY PRESENTED) The method according to Claim 1, wherein another compound, which contains a bonding site for the substance being assayed and a reaction partner R2, bonds to reaction partner R1 on the surface.

6. (PREVIOUSLY PRESENTED) The method according to Claim 5, wherein reaction partner R1 includes avidin or streptavidin and reaction partner R2 includes biotin and a binding site for the substance being assayed.

Claims 7 through 26 have been CANCELLED

27. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein the substance being assayed includes a biologically active substance, which is selected from the group of hormones, proteins, viruses, bacteria, pharmaceuticals and toxins.

28. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein the substance being assayed includes a protein, preferably an antigen or an antibody.

29. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein the compound containing fluorophor has a fluorescing compound and a binding site for the substance being assayed.

30. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein fluorescing proteins and/or low-molecular fluorescing chemical compounds are used as the fluorophor.

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31. (PREVIOUSLY PRESENTED) The method according to claim 30, wherein phycobili proteins, such as allophycocyanine (APC), Cryptofluor Crimson or Cryptofluor Red are used as fluorescing proteins.

32. (PREVIOUSLY PRESENTED) The method according to claim 31, wherein Cy5 or BODIFY are used as low-molecular fluorescing compounds.

33. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein at least one fluorophor that absorbs in a wavelength range from 600 to 700 nm is used.

34. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein at least one phosphorescing compound is used as the fluorophor.

35. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein a mixture of dyes that absorb in the absorption and/or emission range of the fluorophor is used.

36. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein at least one dye that absorbs in a wavelength range form 600 to 700 nm is used.

37. (PREVIOUSLY PRESENTED) The method according to claim 36, wherein Brilliant Blue FCF in a concentration of at least 0.001 mM is used as the at least one dye.

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38. (PREVIOUSLY PRESENTED) Cuvette or microtiter plate for use in the method according to claim 1 that have at least one reaction partner for the substance being assayed bonded to a surface, whereby the cuvette contains a plastic.

39. (PREVIOUSLY PRESENTED) The cuvette or microtiter plate according to claim 38, whereby the at least one reaction partner R1 comes in lyophilized form.

40. (PREVIOUSLY PRESENTED) The cuvette or microtiter plate according to claim 38, whereby the cuvette includes polystyrene, polypropylene, polyethylene, polyacrylnitrile, polymethylmethacrylate, polycycloolefin, polyethylene terephthalate and/or mixtures thereof.

41. (PREVIOUSLY PRESENTED) The cuvette or microtiter plate according to claim 38, whereby the cuvette or microtiter plate is one-piece.

42. (PREVIOUSLY PRESENTED) The cuvette according to claim 38, whereby the cuvette has a reaction volume of 1 to 400 µl.

43. (PREVIOUSLY PRESENTED) A solution containing at least one compound containing fluorophor, at least one dye and, if necessary, a reaction partner R2 for use in the method according to claim 1.

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44. (PREVIOUSLY PRESENTED) A kit for use in the method according to claim 1, including at least one plastic containing cuvette or microtiter plate having a reaction partner for a substance to be assayed.

45. (PREVIOUSLY PRESENTED) The use of the method according to claim 1 to determine reaction kinetics of immunologic reactions.

46. (PREVIOUSLY PRESENTED) The use of the method according to claim 1 in medical or veterinary medical diagnostics, food analysis, environmental analysis or analysis of fermentation processes.

47. (PREVIOUSLY PRESENTED) The method according to claim 27, wherein:

the substance being assayed includes a protein, preferably an antigen or an antibody;

the compound containing fluorophor has a fluorescing compound and a binding site for the substance being assayed;

fluorescing proteins and/or low-molecular fluorescing chemical compounds are used as the fluorophor;

phycobili proteins, such as allophycocyanine (APC), Cryptofluor Crimson or Cryptofluor Red are used as fluorescing proteins;

Cy5 or BODIFY are used as low-molecular fluorescing compounds;

fluorophor that absorbs in a wavelength range from 600 to 700 nm is used;

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FAX. (617) 451-0313

at least one phosphorescing compound is used as the fluorophor;

a mixture of dyes that absorb in the absorption and/or emission range of the fluorophor is used;

at least one dye that absorbs in a wavelength range form 600 to 700 nm is used;

Brilliant Blue FCF in a concentration of at least 0.001 mM is used as the at least one dye.

48. (PREVIOUSLY PRESENTED) The cuvette or microtiter plate according to claim 38, wherein:

the at least one reaction partner R1 comes in lyophilized form;

the cuvette includes polystyrene, polypropylene, polyethylene, polyacrylnitrile, polymethylmethacrylate, polycycloolefin, polyethylene terephthalate and/or mixtures thereof;

the cuvette or microtiter plate is one-piece;

the cuvette has a reaction volume of 1 to 400 µl.

49. (PREVIOUSLY PRESENTED) A solution containing at least one compound containing fluorophor, at least one dye and, if necessary, a reaction partner R2 for use in the method according to claim 47.

50. (PREVIOUSLY PRESENTED) A solution containing at least one compound containing fluorophor, at least one dye and, if necessary, a reaction partner R2 for use in the method according to claim 48.

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51. (PREVIOUSLY PRESENTED) A kit according to claim 44 having at least one phosphor solution.

52. (PREVIOUSLY PRESENTED) The use of the method according to claim 47 to determine reaction kinetics of immunologic reactions.

53. (CANCELLED)

54. (PREVIOUSLY PRESENTED) The use of the method according to claim 47 in medical or veterinary medical diagnostics, food analysis, environmental analysis or analysis of fermentation processes.

55. (CANCELLED)

REINGARTEN, SCHURGIN,
GAGNEBIN & LEBOVICI LLP
TEL. (617) 542-2290
FAX. (617) 451-0313